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Ontario Hydro-Electric Inquiry Commission, 1922-1924

FINANCIAL ALLAN ROSS

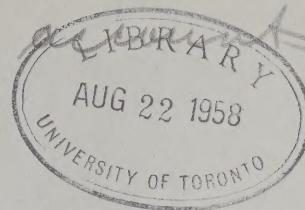
Commission

HYDRO-ELECTRIC INQUIRY COMMISSION

(HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO)

31

Reports on investigation of accounts



REPORT ON INVESTIGATION OF ACCOUNTS
OF
MUSKOKA SYSTEM
DATED NOVEMBER 7, 1922

Pice, Waterhouse & Co.

ROYAL BANK BUILDING

TORONTO, ONT., CANADA

PRICE, WATERHOUSE & Co.

UNITED STATES. CANADA. MEXICO.
GREAT BRITAIN.

ROYAL BANK BUILDING

TORONTO

CONTINENTAL EUROPE, ETC.
PRICE, WATERHOUSE, PEAT & CO.
SOUTH AMERICA
PRICE, WATERHOUSE, FALLER & CO.
ALSO, GREAT BRITAIN
W. B. PEAT & CO.

November 7, 1922.

W. D. Gregory, Esq., Chairman,
Hydro-Electric Inquiry Commission,
Toronto, Ontario.

Dear Sir:

MUSKOKA SYSTEM

In accordance with your instructions we have made a general investigation of the accounts and records relating to the Muskoka System, operated under trusteeship, by the Hydro-Electric Power Commission of Ontario, and now beg to submit our report:

SCOPE OF INVESTIGATION

The books and accounts of the Hydro-Electric Power Commission of Ontario have been audited by Mr. G. T. Clarkson, F. C. A., of Messrs. Clarkson, Gordon & Dilworth, Chartered Accountants, from the commencement of the Commission's activities, to October 31, 1921, therefore, it was considered, as in the case of the Niagara and other Systems, that our investigation should be limited to a general review of the accounts and to an inquiry into any important questions of principle involved therein.

The accounts specifically of the Muskoka System, which form part of the general books of the Hydro-Electric Power Commission of Ontario, are dealt with in this report and are as follows:

<u>ACCOUNTS</u>	<u>BALANCE AS AT OCTOBER 31, 1921</u>	
	<u>DEBIT</u>	<u>CREDIT</u>
<u>CAPITAL INVESTMENT</u>	\$212,530.96	\$
<u>OPERATING ACCOUNTS</u>	-	
<u>RESERVE FOR RENEWALS</u>		25,471.39
<u>RESERVE FOR SINKING FUND</u>		750.60
<u>RESERVE FOR CONTINGENCIES</u>		1,911.14
<u>POWER ACCOUNTS RECEIVABLE</u>	10,735.31	
<u>ACCOUNTS IN RESPECT OF</u>		
<u>COST OF POWER (ADJUSTED)-</u>		
<u>ACCOUNT RECEIVABLE</u>	6,272.07	
<u>ACCOUNT PAYABLE</u>		1,290.35

In connection with the foregoing accounts, we have prepared and have attached hereto, the following statements:

Exhibit I Operating Accounts

- " II Statement showing the basis of the annual rate of the Reserve for Renewals

Excerpts from Agreement for Supply of Power -

- " III Town of Gravenhurst
- " IV Town of Huntsville

HISTORY AND ORGANIZATION

In October 1915, the Hydro-Electric Power Commission of Ontario purchased from the Town of Gravenhurst, a power development, which consisted of certain lands, storage dam, power house, generating equipment, etc., situated at South Falls on the south branch of the Muskoka River. As the purchase consideration, the Commission assumed certain unmatured debentures outstanding against the property, aggregating \$50,595.93, and consisting as follows:

All outstanding debentures issued under
Municipal By-Laws-

By-Law Number 381-397

\$38,532.26

By-Law Number 480

7,693.15 \$46,225.41

One-third of the liability in respect
of outstanding debentures issued
under By-Law Number 409

4,370.52

Total

\$50,595.93

The position as at October 31, 1921, of these debenture
liabilities, taken over by the Commission, was as follows:

Issued under By-Law No. 381-397-

Liability assumed October 1915

\$38,532.26

Deduct- amounts paid on these
debentures to October 31, 1921

6,806.69 \$31,725.57

Issued under By-Law No. 480-

Liability assumed October 1915

\$ 7,693.15

Deduct- Sinking Fund Payments,
with accrued interest

946.13 6,747.02

Issued under By-Law No. 409-

Liability assumed October 1915

\$ 4,370.52

Deduct- Sinking Fund Payments
with accrued interest

591.32 3,779.20

Total

\$42,251.79

The annual payments required in connection with the above
debentures, for principal and interest are -

By-Law No. 381- 397 Principal and
Interest

\$ 2,927.31

By-Law No. 409- Sinking Fund and
Interest

\$ 1,017.45

one-third of which
is payable by the
Hydro-Electric Power
Commission

339.15

By-Law No. 480- Sinking Fund and
Interest

582.64

Total

\$3,849.10

For further particulars regarding the debentures issued in connection with these properties, reference may be made to Exhibit XII of our Memorandum relative to Bonds and Debentures, submitted on July 28, 1922.

The purchase of the properties and the assumption by the Commission of the unmatured obligations, as stated above, were approved by His Honour, the Lieutenant-Governor, in Order-in-Council, dated November 10, 1915.

Upon the recommendation of the Hydro-Electric Power Commission of Ontario, as stated in the Order-in-Council -

"The Committee of Council advise that in view of the contracts entered into with the Municipalities of Huntsville and Gravenhurst, and the request of other Municipalities in the District for a supply of power, the said Commission be authorized to take over the property and development now owned by the Municipality of Gravenhurst."

The Town of Gravenhurst began to take power from the Commission in October 1915, and in September 1916, was followed by the Town of Huntsville. The Commission made improvements and extensions to the plant acquired from Gravenhurst, and subsequent to October 1916 the municipalities were served with their full power requirements. In addition to the municipalities of Gravenhurst and Huntsville, power is also sold to sundry customers at Muskoka Falls. The horse power generated by the System during the past four years was as follows:

<u>Years</u>	<u>Horse Power</u>
1918	989
1919	1186
1920	1350
1921	1207

Contracts were entered into between the Hydro-Electric Power Commission of Ontario and the municipalities of Gravenhurst and Huntsville under dates of October 25, 1915, and March 10, 1915, respectively, in respect of which excerpts have been made and are submitted on Exhibits III and IV, attached hereto. In this connection it should be

pointed out that these agreements, as stated therein, "shall remain in force for sixteen years from the date of the first delivery of power" under the contract. In the Huntsville agreement, in addition to other stipulations, the municipality agrees -

"Also to pay an annual sinking fund instalment of such amount as to form at the end of sixteen years, with accrued interest, a sinking fund sufficient to repay the Corporation's proportionate part, based as aforesaid, of all moneys advanced by the Province of Ontario for the acquiring of the properties and rights, and acquiring and construction of generating plants, transformer stations, transmission lines, * * * * *"

Under date of April 27, 1916, the Legislature of Ontario passed "An Act to amend The Power Commission Act and to confirm Certain By-Laws and Contracts", the amendment appearing in the Statutes of Ontario, 6 George V. Chapter 19. Section 16 of the amendment relating to the above mentioned agreements, is as follows:

"The contracts set out as Schedules * * * "D", "E", hereto between the Hydro-Electric Power Commission of Ontario and * * * the Town of Gravenhurst, the Town of Huntsville, * * * are hereby confirmed and declared to be legal, valid and binding upon the parties thereto respectively, and shall not be open to question upon any grounds whatsoever, notwithstanding the requirements of The Power Commission Act, or the amendments thereto or any other statute."

It may be seen from the foregoing that there is an apparent conflict of the Statutes, in that The Power Commission Act provides that the sinking fund shall be on a basis of thirty years, whereas the Huntsville agreement specifies a sixteen year period. Both agreements extend over a period of sixteen years from the date of the first delivery of power under each contract.

CAPITAL INVESTMENT - \$212,530.96:

Under date of June 28, 1915, the hydraulic engineer of the Hydro-Electric Power Commission of Ontario, reported, in connection with the acquisition of the South Falls Plant, etc., that -

"An accurate distribution among the various classes of service is not possible with the data available from

the Municipalities' books, but a fairly reasonable pro rata distribution can be made on the basis of the valuation figures hereto attached."

These figures give the following result for the various classes of assets:

Description	Replacement Value	Present Value
Generation	\$52,158	\$39,386
Transmission	10,120	4,048
Transformation	13,050	10,362
Distribution	15,366	8,734
<u>Total</u>	<u>\$90,694</u>	<u>\$62,530</u>

As the consideration for the purchase of the above assets the Hydro-Electric Power Commission assumed debentures amounting to \$50,595.93, as previously explained. Since acquiring this property the Power Commission has expended \$161,935.03 thereon, the total investment at October 31, 1921 aggregating \$212,530.96 being made up as follows:

Particulars	Power Development	Wood Pole Lines	Distributing Stations	Together
Cost (in Debentures assumed) of properties acquired October 1915	\$ 50,595.93	-	-	50,595.93
Expenditures for extensions and improvements- to October 31, 1917	76,510.50	54,217.02	8,916.35	139,643.87
Year ending October 31-				
1918	7,230.02	96.42	707.61	8,034.05
1919	4,853.12	-	9.60	4,862.72
1920	8,828.56	-	152.14	8,980.70
1921	302.54	-	111.15	413.69
<u>Total</u>	<u>\$148,320.67</u>	<u>54,313.44</u>	<u>9,886.85</u>	<u>212,530.96</u>

The more important of the expenditures for extensions and improvements to the properties, are in respect of the following:

Power Development -

South Falls Generating Station, etc.	\$43,488.95	
Hydraulic Construction, etc.	54,235.79	\$97,724.74

Wood Pole Lines -

Transmission line from South Falls generating station to the Town of Huntsville	\$52,700.07	
Miscellaneous	1,613.37	54,313.44

Distributing Station at Huntsville -

Building	\$ 1,500.53	
Electrical and other equipment	8,396.32	9,896.85

Total expended for extensions and improvements since October 1915		<u>\$161,935.03</u>
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In view of the fact that the accounts have previously been audited, the above details have been accepted by us as correct, as it does not appear that there are any questions of principle involved therein.

Estimate of Additional Funds

Required for Construction - \$10,000.00:

It has been estimated by the engineers of the Hydro-Electric Power Commission that additional funds will be required for the Muskoka System during the two years ending October 31, 1923, as follows:

Year ending October 31, 1922-	
"To cover improvements to extension of lines and stations"	\$ 5,000.00
Year ending October 31, 1923-	
"To provide for, and betterments to stations or lines, the necessity for which may develop"	5,000.00
<u>Total</u>	<u>\$10,000.00</u>

These amounts are as stated in the published estimates of the Province of Ontario, for the fiscal years ending October 31, 1922 and October 31, 1923.

OPERATING ACCOUNTS:

The Operating Account of the Muskoka System for each of the four years ending October 31, 1921, is attached hereto, Exhibit I. For convenience of reference, the following brief summary of the operating results for the four years, sub-divided according to Municipalities and companies, is given (cents omitted):

Particulars	Year ending October 31			
	1918	1919	1920	1921
<u>Municipalities:</u>				
Revenue (per Operating Account)	\$23,739	27,064	27,184	27,122
Operating Cost, including power purchased	\$ 8,642	10,878	9,775	11,106
Fixed Charges	15,097	16,186	17,409	16,016
<u>Total Expenses</u>	\$23,739	27,064	27,184	27,122
<u>Balance</u>	Nil	Nil	Nil	Nil
<u>Companies:</u>				
Revenue (per Operating Account)	\$ 59	59	54	51
Fixed Charges	\$ 21	22	23	20
Profit transferred to Contingent Reserve	\$ 38	37	31	31
<u>Together, per Operating Account, Operating Cost, etc.</u>	\$ 8,642	10,878	9,775	11,106
Fixed Charges	15,118	16,208	17,432	16,036
<u>Combined</u>	\$23,760	27,086	27,207	27,142
<u>Percentage, Fixed Charges to Total Expenses-</u>				
For Municipalities	63.59%	59.81%	64.04%	59.05%

It will be seen from the above summary that the municipalities were charged with the cost of power and the distribution thereof, and with that proportion of the fixed charges which pertains to the power supplied.

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The following table shows the results of the experiments conducted on the effect of the concentration of the solution on the rate of reaction. The results show that the rate of reaction increases with the concentration of the solution.

Concentration of solution (M)	Rate of reaction (mol/l.s)
0.1	0.001
0.2	0.002
0.3	0.003
0.4	0.004
0.5	0.005
0.6	0.006
0.7	0.007
0.8	0.008
0.9	0.009
1.0	0.010

It is observed that the rate of reaction increases with the concentration of the solution. This is due to the fact that the proportion of the molecules which are in contact with each other is increased.

The operating results shown above are those stated in the published accounts of the Commission. As referred to later under the caption of Reserve for Renewals, an adjustment of \$8,263.37 including interest was made during 1921 in respect of the provision for renewals, reducing the reserve from a basis of 3½% per annum to 2½% per annum, retroactive from the inception of the System to October 31, 1920. Of this amount the municipalities of Gravenhurst and Huntsville received credit for \$1,671.83 and \$6,582.68 respectively, while the balance of \$8.86 representing profit on sale of power to sundry customers at Muskoka Falls, was credited to the Reserve for Contingencies.

This adjustment had the effect of reducing the amount of the fixed charges, as follows:

<u>Period</u>	<u>Municipalities</u>	<u>Sundry Customers</u>	<u>Together</u>
Year ending October 31,			
1917	\$1,673.73	\$ -	\$1,673.73
1918	1,979.90	2.95	1,982.85
1919	2,028.51	2.95	2,031.46
1920	2,120.66	2.96	2,123.62
<u>Total</u>	<u>\$7,802.80</u>	<u>\$8.86</u>	<u>\$7,811.66</u>

Giving effect to this adjustment in the charges for power previously made to these municipalities, excluding therefrom the amount of interest applicable to the amount of the renewal provision adjustment, the following statistical data are submitted, showing on the basis of horse power the rates used in interim power bills and the rates as adjusted to actual cost:

Particulars	Gravenhurst			Huntsville		
	Average H.P.	Rates		Average H.P.	Rates	
		Interim	Actual Cost (adjusted)		Interim	Actual Cost (adjusted)
Year ending October 31-						
1918	312.6	\$12.56	\$17.18	667.3	\$22.51	\$24.32
1919 To April 30	359.3	12.56)	17.09	826.6	22.51)	22.85
To October 31		14.00)			25.00)	
1920	478.4	14.00	14.43	871.6	25.00	20.84
1921 To Dec.31, 1920	368.2	14.00)	19.10	839.0	25.00)	23.94
To Oct.31, 1921		15.00)			25.00)	
Ten months ending						
August 31, 1922-						
To Dec.31, 1921	296.2	*15.00		816.9	25.00	
To Aug.31, 1922		20.00			25.00	

(* From January 1 to July 1, the interim rate billed was \$15.00 but adjustment was made in August, to \$20.00, retroactive to January 1, 1922)

Operating accounts prepared by the Accountant of the Commission for the ten months ending August 31, 1922, based partly on estimates, show a deficit at the 1922 rates, stated above, of \$272.91, for the ten months' period, interest on capital investment, included therein being calculated at the estimated interim rate of 5% per annum, as compared with the actual rate in 1921, of 4.55%. The average monthly operating expenses, including fixed charges, amount to \$2,633.16 on the above basis, for the ten months ending August 31, 1922, as compared with \$2,261.83 for the twelve months ending October 31, 1921, or an increase of 16.4%, of which 14.9% represents increased charges in respect of sinking fund and interest. The increase in sinking fund is due to initial assessment in 1922 against the Town of Huntsville.

RESERVE FOR RENEWALS- \$25,471.39:

During the period from the commencement of operations in 1915 to October 31, 1920, the additions to the Reserve for Renewals, in respect of the properties of the Muskoka System, were provided through inclusion in the cost of power to the municipalities of an annual charge

of 3½% on the capital invested in the works, lines, etc., together with interest at 4% per annum on the balance in the Reserve Account.

In the fiscal year ending October 31, 1921, upon the advice of its engineers, the Commission reduced the annual rate of renewal from 3½% to 2½% on the capital investment, while the interest rate of 4% remained unchanged. The accounts of the Commission were so adjusted that the rate of 2½% was made effective from the inception of the System to October 31, 1921, and the cost of power to the municipalities was correspondingly reduced.

A summary of the Reserve Account, with a balance of \$25,471.39, as constituted at October 31, 1921, upon the 2½% basis, is as follows:

<u>Particulars</u>	<u>Annual Accrual</u>	<u>Interest at 4%</u>	<u>Together</u>
Fiscal Year ending October 31-			
1917	\$ 4,184.33	\$	\$ 4,184.33
1918	4,956.73	167.37	5,124.10
1919	5,078.29	372.44	5,450.73
1920	5,308.63	590.59	5,899.22
1921	5,313.27	822.51	6,135.78
Together	\$24,841.25	\$ 1,952.91	\$26,794.16
Deduct-			
Cost of Renewals, Replacements, etc.-			
Cost of Rewinding 450 K.W. Genera- tor and repairs thereto and sundry charges		\$ 1,160.12	
Portion of Reserve applicable to Property transferred from System		20.00	
		<u>\$ 1,180.12</u>	
Interest applicable to above charges		142.65	1,322.77
Balance as at October 31, 1921			<u>\$25,471.39</u>

The annual rate of 2½% was determined by a reclassification of the properties made by the Engineering Department of the Commission and reflected in the book accounts as at October 31, 1920. The life, residual value, etc., were estimated upon the various classes of property and equipment, as set forth in Exhibit II. The actual rate arrived at

was 2.424%, as shown in the Exhibit, and the rate of 2.5% of the Capital Investment was therefore adopted as a matter of convenience. In arriving at the above mentioned rate, clerical errors in the computation were made by the Engineering Department, as we find that the ratio of the required annual provision on the basis of the properties as at October 31, 1920, was 1.694% instead of 2.424%, a difference of .73%. These corrected figures are also stated in Exhibit II. As a result of this discrepancy, we understand the Commission is now considering the advisability of a further reduction in the annual renewal rate of 2.5 which was used and a consequent adjustment of the entire Renewal Reserve Account.

It may, in passing, be of interest to state that the sinking fund method adopted in making provision for renewals at the rate of 2½%, together with interest at 4% per annum, is equivalent to a straight line provision of approximately 4% for a period of twenty-five years. That is, while the annual provisions under the two methods differ in amount, either method would accumulate the sum required at the end of a twenty-five year period.

RESERVE FOR SINKING FUND - \$750.60:

The reserve for sinking fund of the Muskoka System is provided on the same basis as for the Niagara and other Systems, operated under trusteeship, by the Hydro-Electric Power Commission of Ontario. As is permitted under the Power Commission Act, the collection of the sinking fund for the two municipalities in this System, was deferred. During the fiscal year ending October 31, 1921, the Municipality of Gravenhurst had been operating for six years, therefore, there was included in the cost of power for the year ending October 31, 1921, an amount of \$750.60 for sinking fund, based on a rate of 1.8% on the capital employed, applicable to that municipality. As Huntsville had not been operating for six years no provision for sinking fund has been

made, but the amount of sinking fund deferred, amounted to \$3,069.84. The amount of sinking fund based on the rate of 1.8% is determined as follows:

<u>Particulars</u>	<u>Started Operating</u>	<u>Capital Employed</u>	<u>Amount of Sinking Fund</u>
Gravenhurst	November 1915	\$ 41,699.52	\$ 750.60
Huntsville	September 1916	170,847.33	3,069.84
		212,246.95	3,820.44
Sundry Customers			
Muskoka Falls		284.01	* 5.12
<u>Total as at October 31, 1921</u>		<u>\$212,330.96</u>	<u>\$ 3,825.56</u>

* Payment of this item has been deferred until the year ending October 31, 1922.

RESERVE FOR CONTINGENCIES - \$1,911.14:

The reserve for contingencies was established by the Commission for the purpose of providing for special losses or expenses not arising at regular intervals, and not wholly applicable to the period in which incurred. The contingency reserve of this System is principally provided, through a charge of 25 cents per horse power, included in the costs of power supplied each year to municipalities and others. The interest, credited to the account, is calculated at the rate of 4% per annum on the balance in the reserve account at the beginning of each year.

A summary of the reserve from the time the account was started, to October 31, 1921, is given below (cents omitted):

<u>Particulars</u>	<u>Year ending October 31</u>					<u>Total</u>
	1917	1918	1919	1920	1921	
Amounts included as part of cost of power to Municipalities	\$252	\$247	\$296	\$338	\$302	\$1,435
Net profit for the year on power sold to sundry customers	57	33	37	31	31	194
Profit on rental and sales of equipment, etc.	-	120	7	-	9	136
Interest	-	12	29	44	61	146
<u>Total</u>	<u>\$309</u>	<u>\$417</u>	<u>\$369</u>	<u>\$413</u>	<u>\$403</u>	<u>\$1,911</u>

ACCOUNTS WITH MUNICIPALITIES:

Accounts with municipalities are divided by the Commission, in the main, as follows:

Power Accounts Receivable

Due by or to Municipalities in respect of the cost of power furnished them, as determined by the Power Commission Act.

Power Accounts Receivable - \$10,735.31-

These accounts represent unpaid balances in respect of interim power bills rendered, which at October 31, 1921, amounted to \$10,735.31. As at September 30, 1922, the date inquired into by us, all accounts had been paid.

Due by or to Municipalities in respect
of the cost of power - Account Receivable \$6,272.07-
Account Payable \$1,290.35-

As at the close of each fiscal year the interim power bills rendered monthly are adjusted to meet the operating cost of the System, determined as provided for in Section 6c and 23 of the Power Commission Act. As a result of such adjustments Gravenhurst stood charged with an amount of \$6,272.07, and Huntsville stood credited with \$1,290.35. The period of time over which these accounts extend, is shown in the following summary:

G r a v e n h u r s t				H u n t s v i l l e		
Year	Short Payments	Inter- est	Total	Short- Over Payments	Inter- est	Total
1917	\$1,446.42	\$ -	\$1,446.42	\$2,569.40	\$ -	\$2,569.40
1918	1,914.66	57.86	1,972.52	2,765.21	102.78	2,867.99
1919	1,724.04	136.75	1,860.79	745.28	217.50	962.78
1920	684.26	211.19	895.45	1,937.85	256.01	1,731.84
1921	1,588.59	180.13	1,768.72	856.38	76.87	933.25
	\$7,357.97	\$585.93	\$7,943.90	\$3,205.36	\$499.72	\$3,705.08
Deduct - Credit, due to reduction in renewal rate			\$1,671.83	-	-	\$6,582.68
Cash payments by Commission			\$6,272.07	-	-	\$2,877.60
			\$ -	-	-	\$1,587.25
Balance (Debit-Credit)			\$6,272.07	-	-	\$1,290.35

It may be observed from the above analysis that the municipalities made no payments on account, and that in the case of Gravenhurst the balance has been increasing each year since 1917, the first year of operations, indicating that the interim power bills do not cover the actual cost of power.

As previously mentioned, consideration is now being given by the Commission, to a reduction, retroactive over a period of years, of the reserves made for renewals, in respect of this System. Should such an adjustment be given effect to as formerly the account due by or to each municipality will receive credit for its proportionate amount thereof.

Yours very truly,

Price, Waterhouse & Co.

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

MUSKOKA SYSTEM - OPERATING ACCOUNT

Particulars	Year ending October 31,			
	1918	1919	1920	1921
REVENUE:				
From Municipalities	\$23,738.70	\$27,064.34	\$27,184.10	\$27,121.94
From Sundry Customers	59.50	59.00	84.15	51.00
Total Revenue	\$23,798.20	\$27,123.34	\$27,268.25	\$27,172.94
COST OF OPERATING, including portion of Administrative Expense:				
Power Development and Transformer Stations- Operating -				
Labor	\$ 3,347.25	\$ 4,099.35	\$ 4,527.35	\$ 4,698.31
Materials and Miscellaneous Expense	965.10	1,005.36	846.50	823.42
Maintenance	1,750.40	2,756.41	1,640.83	2,149.98
Transmission Lines - Maintenance	409.60	304.87	55.19	602.07
Overhead Expenses -				
Head Office Salaries	668.82	1,053.16	893.01	760.10
Head Office Expenses	270.93	409.69	328.76	433.58
Municipal Administration	454.05	520.26	308.98	509.55
Miscellaneous	776.00	728.48	1,174.72	1,129.13
Total Expenses	\$ 8,642.24	\$10,877.78	\$ 9,775.34	\$11,106.14
Balance before deducting Fixed Charges	\$15,155.96	\$16,245.56	\$17,462.91	\$16,066.80
DEDUCT- Fixed Charges:				
Interest on Capital Investment	\$ 7,930.95	\$ 8,802.57	\$ 9,661.89	\$ 9,670.16
Provision for Renewals	6,939.58	7,109.75	7,432.25	5,313.27
Provision for Sinking Fund	-	-	-	750.60
Provision for Contingencies	247.23	296.47	337.50	301.80
Total Fixed Charges	\$15,117.76	\$16,208.79	\$17,431.64	\$16,035.83
Net Profit (representing profit on sale of power to sundry customers)	38.20	36.77	31.27	30.97
Appropriation of the Net Profit on power sold to sundry customers at Muskoka Falls, credited to Reserve for Contingencies	38.20	36.77	31.27	30.97
Balance	Nil	Nil	Nil	Nil

MUSKOKA SYSTEM

STATEMENT SHOWING BASIS OF ANNUAL RATE FOR THE RESERVE FOR REPAIRS

Particulars	Capital Investment (October 31, 1920)		Estimated Residual Values		Reserve to be provided					
	Total Cost	Estimated Life (in years)	% of Investment	Amount	Total Amount	Annual Provision (as used) (Sinking Fund Basis)		Annual Provision (as corrected) (Sinking Fund Basis)		
						Amount	% to Investment	Amount	% to Investment	
LINES:										
Right-of-Way	\$ 2,659.00	-	100	\$ 2,659.00	\$ -	\$ -	-	\$ -	-	-
Cable	10,575.00	75	60	6,345.00	4,230.00	38.13	-	9.43	-	-
Pole Line	41,079.00	16	5	2,054.00	39,025.00	2,261.30	-	1,788.13	-	-
Together	\$ 54,313.00	-	-	\$ 11,058.00	\$ 43,255.00	\$ 2,299.43	4.233	\$ 1,797.56	3.310	-
STATIONS:										
Site	\$ -	-	100	\$ -	\$ -	-	-	\$ -	-	-
Buildings	1,578.00	60	20	316.00	1,262.00	15.45	-	5.30	-	-
Electrical Equipment	8,193.00	25	20	1,637.00	6,556.00	251.81	-	157.18	-	-
Mechanical Equipment	24.00	25	5	1.00	23.00	.81	-	.55	-	-
Together	\$ 9,795.00	-	-	\$ 1,954.00	\$ 7,831.00	\$ 248.07	2.535	163.03	1.666	-
POWER DEVELOPMENT:										
Old Plant-										
Miscellaneous Concrete	\$ 4,527.00	100	-	\$ -	\$ 4,527.00	\$ 26.56	-	3.66	-	-
Lumber	69.00	20	5	3.00	66.00	3.00	-	2.22	-	-
Miscellaneous Steel	241.00	50	5	12.00	229.00	6.58	-	4.08	-	-
Penstocks	8,521.00	50	8	682.00	7,839.00	121.61	-	51.35	-	-
Main Dam	8,050.00	100	-	-	8,050.00	47.22	-	6.50	-	-
Turbine	4,054.00	25	5	203.00	3,851.00	136.35	-	92.47	-	-
Generator	7,768.00	25	20	1,554.00	6,214.00	239.02	-	149.21	-	-
Total Old Plant	\$ 33,230.00	-	-	\$ 2,454.00	\$ 30,776.00	\$ 561.34	1.689	\$ 309.49	.931	-
New Plant-										
Hydraulic Extension-										
Land Clearing and Excavation	\$ 17,024.00	-	100	\$ 17,024.00	\$ -	\$ -	-	\$ -	-	-
Structural Steel	1,761.00	50	7	123.00	1,638.00	25.41	-	10.73	-	-
Rocks, Gates and Valves	230.00	25	5	12.00	218.00	7.72	-	5.23	-	-
Concrete	11,569.00	100	-	-	11,569.00	67.86	-	9.35	-	-
Lumber	5,846.00	20	5	292.00	5,554.00	252.23	-	186.51	-	-
Wood Pipe Line	1,596.00	20	2½	40.00	1,556.00	70.67	-	52.25	-	-
Steel Pipe and Penstocks	672.00	50	8	54.00	618.00	9.59	-	4.05	-	-
Turbines and Governors	9,444.00	25	5	472.00	8,972.00	317.67	-	215.44	-	-
Miscellaneous Hardware	2,942.00	30	5	147.00	2,795.00	80.25	-	49.83	-	-
Frame Structures	2,281.00	20	25	570.00	1,711.00	86.79	-	57.46	-	-
Masonry and Brickwork	118.00	50	7	8.00	110.00	1.71	-	.72	-	-
Total New Plant - Hydraulic	\$ 53,483.00	-	-	\$ 18,742.00	\$ 34,741.00	\$ 919.90	1.719	\$ 591.57	1.106	-
Electrical Extension-										
Building	\$ 7,472.00	60	20	\$ 1,494.00	\$ 5,978.00	\$ 73.19	-	\$ 25.12	-	-
Electrical Equipment	35,980.00	25	20	7,016.00	28,964.00	993.66	-	673.87	-	-
Mechanical Equipment	728.00	25	5	36.00	692.00	24.30	-	16.62	-	-
Frame Structures	660.00	20	25	165.00	495.00	22.48	-	16.62	-	-
Total New Plant- Electrical	\$ 43,940.00	-	-	\$ 8,711.00	\$ 35,229.00	\$ 1,113.63	2.534	\$ 732.23	1.666	-
Totals	\$194,751.00	-	-	\$ 42,919.00	\$151,832.00	\$ 5,142.37	2.640	\$ 3,593.88	1.848	-
Add - Intangibles	* 17,366.00	-	100	17,366.00	-	-	-	-	-	-
Balance per books at October 31, 1920	\$212,117.00	-	-	\$ 60,285.00	\$151,832.00	\$ 5,142.37	2.424	\$ 3,593.88	1.694	-

*Represents excess of purchase price over estimated physical values as determined by the Engineers of the Commission on certain acquired properties.

SPECIFICATIONS OF AGREEMENT RE MUNROIA LINES
OPERATED BY THE COMMISSION

Excerpts from Agreement dated October
25, 1915, entered into by the Hydro-
Electric Power Commission of Ontario
and the Municipal Corporation of the
Town of Gravenhurst.

The Commission agrees with the Corporation to reserve and deliver at the earliest possible date, three hundred horse power (300 H.P.) or more of electrical power to the Corporation, and at the expiration of a reasonable notice in writing, which may be given by the Corporation from time to time during the continuance of this agreement, to reserve and deliver to the Corporation, when called for, any additional electric power then available.

In consideration of the foregoing covenants, the Corporation agrees with the Commission:

To pay annually, to the Commission the Corporation's proportionate part of interest and sinking fund (based on the quantity of electrical energy or power taken) on all monies expended by the Commission on capital account for the acquiring of properties and rights, and acquiring and construction of generating plants, transformer stations, transmission lines, distributing stations and other works necessary for the delivery of said electrical power or energy to the Corporation under the terms of this agreement.

Also to pay annually to the Commission, the Corporation's proportionate part (based as above) of the cost of lost power and operating, maintaining, repairing, renewing and insuring the generating plant and other necessary works.

The amounts payable under this contract shall be paid in twelve monthly payments, and bills shall be rendered by the Commission on or before the 5th day and paid by the Corporation on or before the 15th day of each month. All payments in arrears shall bear interest at the legal rate.

To take electric power exclusively from the Commission during the continuance of this agreement.

To pay for three-fourths of the power ordered from time to time by the Corporation and held in reserve for it as herein provided whether it takes the same or not. When the greatest average amount of power taken for any twenty consecutive minutes during any month shall exceed during the twenty consecutive minutes three-fourths of the amount ordered by the Corporation and held in reserve, then the Corporation shall pay for this greater amount during the entire month.

If the Corporation during any month takes more than the amount of power ordered and held in reserve for it, for twenty consecutive minutes, the taking of such excess shall thereafter constitute an obligation on the part of the Corporation to pay for, and on the part of the Commission to hold in reserve such increased quantity of power in accordance with the terms and conditions of this contract.

When the power factor of the greatest amount of power taken for said twenty consecutive minutes falls below 90% the Corporation shall pay for 90% of said power divided by the power factor.

This agreement shall remain in force for 16 years from the date of the first delivery of power under this contract.

The Commission shall at least annually adjust and apportion the amount or amounts payable by the Municipal Corporation or Corporations for such power and such interest, sinking fund, cost of lost power, and cost of generating, operating, maintaining, repairing, renewing and insuring said works.

If at any time any other municipal corporation, or pursuant to said Act, any railway or distributing company, or any other corporation or person, applies to the Commission for a supply of power, the Commission shall notify the applicant and involved corporation or corporations in writing of a time and place to hear all representations that may be made as to the terms and conditions for such supply.

In determining the quantity of power supplied to a municipal corporation the quantity supplied by the Commission within the limits of the Corporation to any applicant other than a municipal corporation shall be computed as a part of the quantity supplied to such Corporation, but such Corporation shall not be liable for payment for any portion of the power so supplied. No power shall be supplied by the municipal corporation to any railway or distributing company without the written consent of the Commission. Power shall not be sold for less than the cost and there shall be no discrimination as regards price and quantity.

At the expiration of this agreement the Commission shall determine and adjust the rights of the Corporation and any other (if any) supplied by the Commission.

If differences arise between Corporations to which the Commission is supplying power, the Commission may upon application fix a time and place, and hear all representations that may be made by the parties, and the Commission shall in a summary manner, when possible, adjust such differences, and such adjustment shall be final. The Commission shall have all the powers that may be conferred upon a Commissioner appointed under the Act Respecting Inquiries Concerning Public Matters.

SPECIMEN OF AGREEMENT ON MUSKOKA LINES
OPERATED BY THE COMMISSION

Excerpts from Agreement dated March
10, 1915, entered into by the Hydro-
Electric Power Commission of Ontario
and the Municipal Corporation of the
Town of Huntsville

The Commission agrees with the Corporation to reserve and deliver at the earliest possible date, eight hundred horse power (800 H.P.) or more of electrical power to the Corporation, and at the expiration of a reasonable notice in writing, which may be given by the Corporation from time to time during the continuance of this agreement, to reserve and deliver to the Corporation, additional electric power when called for.

In consideration of the foregoing covenants, the Corporation agrees with the Commission:-

To pay annually, interest at 4% to 4½% per annum upon the Corporation's proportionate part (based on the quantity of electrical energy or power taken) of all moneys expended by the Commission on capital account for the acquiring of properties and rights, and acquiring and construction of generating plants, transformer stations, transmission lines, distributing stations and other works necessary for the delivery of said electrical power or energy to the Corporation under the terms of this contract.

Also to pay an annual sinking fund instalment of such amount as to form at the end of 16 years, with accrued interest, a sinking fund sufficient to repay the Corporation's proportionate part, based as aforesaid, of all moneys advanced by the Province of Ontario for the acquiring of the properties and rights, the acquiring and construction of generating plants, transformer stations, transmission lines, distributing stations, and other work necessary for the delivery of electrical energy or power, delivered to the Corporation under the terms of this contract. Also to pay the Corporation's proportionate part, based as aforesaid, on the cost of lost power, and the cost of operating, maintaining, repairing, renewing, and insuring said generating plants, transformer stations, transmission lines, distributing stations and other necessary works.

The amounts payable under this contract shall be paid in twelve monthly payments, and bills shall be rendered by the Commission on or before the 5th day and paid by the Corporation on or before the 15th day of each month. All payments in arrears shall bear interest at the legal rate.

To take electric power exclusively from the Commission during the continuance of this agreement.

To pay for three-fourths of the power ordered from time to time by the Corporation and held in reserve for it as herein provided whether it takes the same or not. When the greatest amount of power taken for any twenty consecutive minutes during any month shall exceed during the twenty consecutive minutes three-fourths of the amount ordered by the Corporation and held in reserve, then the Corporation shall pay for this greater amount during the entire month.

If the Corporation during any month takes more than the amount of power ordered and held in reserve for it for twenty consecutive minutes, the taking of such excess shall thereafter constitute an obligation on the part of the Corporation to pay for, and on the part of the Commission to hold in reserve such increased quantity of power in accordance with the terms and conditions of this contract.

When the power factor of the greatest amount of power taken for said twenty consecutive minutes falls below 90% the Corporation shall pay for 90% of said power divided by the power factor.

This agreement shall remain in force sixteen years from the date of the first delivery of power under this contract.

The Commission shall at least annually adjust and apportion the amount or amounts payable by the Municipal Corporation or Corporations for such power and such interest, sinking fund, cost of lost power, and cost of generating, operating, maintaining, repairing, renewing, and insuring said works.

If at any time any other Municipal Corporation or pursuant to said Act, any railway or distributing Company, or any other Corporation or person, applies to the Commission for a supply of power, the Commission shall notify the applicant and involved Corporation or Corporations in writing of a time and place to hear all representations that may be made as to the terms and conditions for such supply.

In determining the quantity of power supplied to a Municipal Corporation the quantity supplied by the Commission within the limits of the Corporation to any applicant other than a Municipal Corporation shall be computed as a part of the quantity supplied to such Corporation, but such Corporation shall not be liable for payment for any portion of the power so supplied. No power shall be supplied by the Municipal Corporation to any railway or distributing company without the written consent of the Commission. Power shall not be sold for less than the cost and there shall be no discrimination as regards price and quantity.

It is hereby declared the Commission is to be a Trustee of all property held by the Commission under this agreement for the Corporation or Corporations supplied by the Commission, but the Commission shall be entitled to a lien upon said property for all monies expended by the Commission under this agreement and not repaid. At the expiration of this agreement, the Commission

- 3 -

shall determine and adjust the rights of the Corporation and any other (if any) supplied by the Commission, taking regard to the amounts paid by them respectively under the terms of this agreement, and such other considerations as may appear equitable to the Commission and are approved by the Lieutenant-Governor-in-Council.

If differences arise between the Corporations to which the Commission is supplying power, the Commission may upon application fix a time and place, and hear all representations that may be made by the parties, and the Commission shall in a summary manner when possible, adjust such differences, and such adjustment shall be final. The Commission shall have all the powers that may be conferred upon a Commissioner appointed under the Act Respecting Enquiries Concerning Public Matters.

